Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University Summer 1983

Comparing Energy Units: Equivalents

Energy sources, such as coal, natural gas, and crude oil, are measured in physical units. Oil is measured in barrels, coal in short tons (usually reported as "tons"), and natural gas in cubic feet.

In order to compare their heat (thermal) content, coal, natural gas, and crude oil are measured in *calories* and *Btu's*. The *calorie* is the amount of energy required to raise the temperature of 1 gram of water 1° centigrade. A *Btu* is the amount of energy necessary to raise the temperature of 1 pound of water 1° Fahrenheit. One Btu equals approximately 202 calories.

Table 2 shows selected energy equivalents used in this publication.

Common Energy Measures and Equivalents

Measurements and equivalents can be difficult and confusing, especially for the lay person. This difficulty is compounded by the common practice of using acronyms to express measures.

Table 1 shows many acronyms and measures which will be used in the *Louisiana Energy Indicators*.

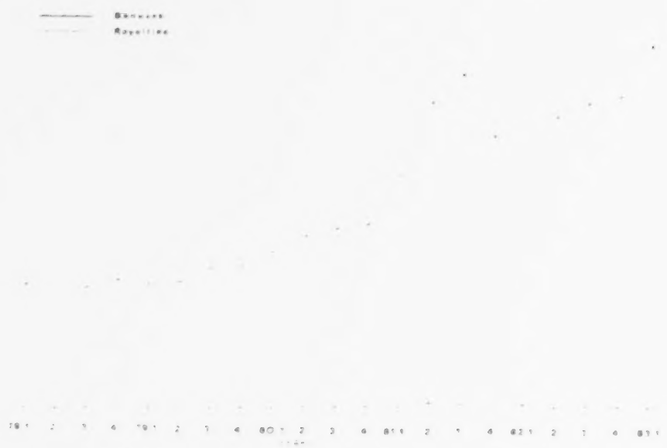
Table 1. Common Energy Acronyms and Measures

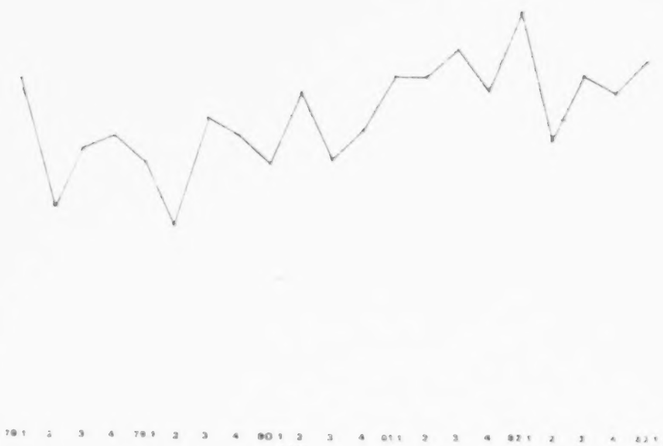
Btu—British Thermal Unit; 1 Btu equals 0.293 watthour or approximately 202 calories.
Bbl—barrels.
MB—thousand barrels.
MMB—million barrels.
Mcf—thousand cubic feet.
MMcf—million cubic feet
Tcf—trillion cubic feet.
MBPD—thousand barrels per day.
MMBPD—million barrels per day.
McfPD—thousand cubic feet per day.
MMcfPD—million cubic feet per day.
W—watt; equals the rate of energy use or conversion when about 0.25 calorie is used or converted per second.
KW—kilowatt; equals 1000 watts.
MW—megawatt; equals 100 kW (1 million watts).
GW—gigawatt; equals 1 million kW (1 billion watts).

Wh—watthour; equals 1 watt of power supplied to or taken from an electric circuit steadily for 1 hour.
kWh—kilowatthour; equals 1 thousand watthours.
MWh—megawatt; equals 1 million watthours.
GWh—gigawatthour; equals 1 million kilowatthours.

Table 2. Selected Energy Equivalents (Adapted from *Annual Energy Review 1982*)

Energy Unit	Bbl's Crude Oil	Tons of Bituminous Coal	Tons of Lignite	Mcf Natural Gas	100 kWh Electricity	Million Btu
1 Bbl crude oil	—	0.24	0.44	5.7	1.75	5.8
1 short ton bituminous	4.13	—	1.84	23.5	7.27	24.0
1 short ton lignite	2.24	0.54	—	12.74	3.9	13.0
1 Mcf natural gas	0.18	0.04	0.07	—	300.0	1.02
1000 kWh electricity	0.59	0.13	0.26	3300.0	—	3.3





Historical Presentation—Revenues

Indicators	77.1	77.2	77.3	77.4	78.1	78.2	78.3	78.4	79.1	79.2	79.3	79.4	80.1
PRINCIPAL ENERGY RELATED STATE REVENUES (Millions $)													
Severance - oil and condensate	66.18	66.35	66.18	64.80	62.88	66.17	67.51	66.99	62.96	64.48	76.10	73.04	86.68
Severance - natural gas	51.68	52.41	50.93	52.16	49.37	50.31	49.07	47.36	45.96	49.39	46.02	46.02	41.38
Bonuses	6.27	0	2.91	9.83	68.67	9.01	8.48	10.49	15.27	12.86	43.17	35.46	16.81
Rentals	1.05	2.04	1.44	9.09	2.72	.59	2.21	2.97	8.16	4.05	4.80	5.17	8.02
Royalties	38.47	38.44	40.02	48.19	44.82	34.51	44.00	46.77	45.23	46.06	51.29	51.87	57.15
Special fuels tax	3.97	4.29	4.43	4.61	4.49	5.17	5.11	5.31	5.11	5.68	5.42	5.97	5.24
Gasoline tax	37.41	41.41	42.14	40.59	38.67	43.53	45.08	42.77	40.80	30.06	43.02	42.68	38.50
Public utilities tax	3.01	3.13	3.40	3.50	3.55	3.67	3.97	3.88	4.41	4.36	8.41	4.96	4.99
Natural gas franchise tax	1.25	1.27	1.13	.98	1.17	1.42	1.19	1.15	1.27	1.44	.97	1.08	1.65
Total	209.29	209.34	212.55	233.75	276.34	215.38	226.6	227.69	229.17	218.3	279.2	266.25	260.42
TOTAL STATE REVENUES (Millions $)	437.8	569.5	496.2	521.0	602.6	648.4	597.2	571.0	619.7	713.1	669.2	667.5	706.2
ENERGY RELATED REVENUES AS % OF STATE TOTAL	47.8	36.76	42.48	44.86	45.85	33.2	37.9	39.87	36.98	30.6	41.72	39.88	36.88

Indicators	80.2	80.3	80.4	81.1	81.2	81.3	81.4	82.1	82.2	82.3	82.4	83.1
PRINCIPAL ENERGY RELATED STATE REVENUES (Millions $)												
Severance - oil and condensate	99.20	118.92	123.06	166.65	230.39	215.16	203.12	209.65	181.36	194.68	191.14	188.52
Severance - natural gas	41.25	38.73	42.63	40.85	40.65	43.52	39.23	40.16	36.52	34.79	36.05	36.59
Bonuses	180.21	2.93	20.08	40.46	38.85	46.14	29.21	27.93	17.07	9.31	12.83	10.53
Rentals	5.56	10.85	7.13	11.20	10.54	11.26	13.40	15.32	14.13	12.31	11.92	10.45
Royalties	62.80	65.51	67.16	84.76	110.58	120.69	98.63	153.97	105.58	110.42	112.74	130.99
Special fuels tax	5.77	6.03	5.86	5.68	6.29	6.01	6.77	6.09	6.56	6.31	6.57	6.06
Gasoline tax	40.90	41.66	40.38	40.67	41.21	38.70	45.03	40.14	41.25	40.81	40.09	36.69
Public utilities tax	5.17	5.62	5.80	5.84	6.25	6.58	6.91	6.85	6.92	7.15	6.96	7.56
Natural gas franchise tax	1.97	1.32	1.35	1.89	2.71	1.61	1.55	2.39	2.77	2.11	2.34	3.31
Total	442.83	289.57	313.45	398	487.47	489.67	443.85	502.5	412.16	417.89	420.64	430.7
TOTAL STATE REVENUES (Millions $)	994.1	774.8	773.0	860.3	1,054.4	994.8	990.7	943.0	1,041.1	898.1	942.5	897.1
ENERGY RELATED REVENUES AS % OF STATE TOTAL	48.01	44.54	37.37	40.54	46.26	46.23	49.22	44.80	53.27	33.58	46.5	44.63

SOURCES OF LOUISIANA ENERGY INDICATOR DATA

Publications

Electric Power Monthly. U.S. Dept. of Energy. Energy Information Administration. Office of Coal, Nuclear, Electric, and Alternate Fuels.
Electricity Production and Consumption Data

Employment and Total Wages Paid by Employers Subject to the Louisiana Employment Security Law. Louisiana Dept. of Labor. Office of Employment Security. Research and Statistics Unit. Quarterly.
Wages, Number of Establishments, Employment Data

Hughes Tool Company as cited in *World Oil*.
Monthly Active Rigs Running

Louisiana Climatological Data. U.S. Dept. of Commerce. National Weather Service. Monthly.
Heating and Cooling Degree Days (Not in this issue)

Labor Market Information. Louisiana Dept. of Labor. Office of Employment Security. Research and Statistics Unit. Monthly.
Employment Data

Louisiana Petroleum Activity Report. Monthly.
Drilling, Rig Activity, Oil and Gas Production, Refinery Runs and Stocks Data

Monthly Energy Review. U.S. Dept. of Energy. Energy Information Administration. Monthly.
Crude Oil Prices, Interstate Natural Gas Price Data

Monthly Motor Gasoline Reported by States. U.S. Dept. of Transportation. Monthly.
Gasoline Consumption

Oil and Gas Journal. Penn Well Publishing Company. Tulsa, Oklahoma.
Gasoline Prices

Weekly Petroleum Status Report. U.S. Dept. of Energy. Energy Information Administration.
Crude Oil Prices

Other Sources

Louisiana Public Service Commission. (Unprinted Data).
Electricity Prices, Natural Gas Prices

Louisiana Department of Revenue. AM08 Revenue Projections Model. Monthly Monitoring Report. (Mimeograph).
Taxes and Revenues

Louisiana State Planning Office. (Unprinted Data).
Total State Revenues

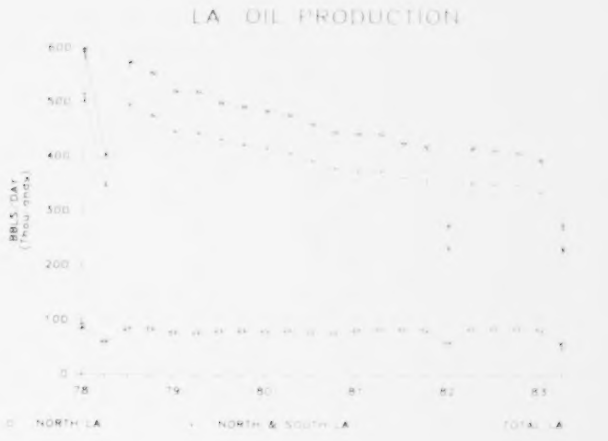
Center for Energy Studies
E. Fraternity Circle
Louisiana State University
Baton Rouge, LA 70803-0301

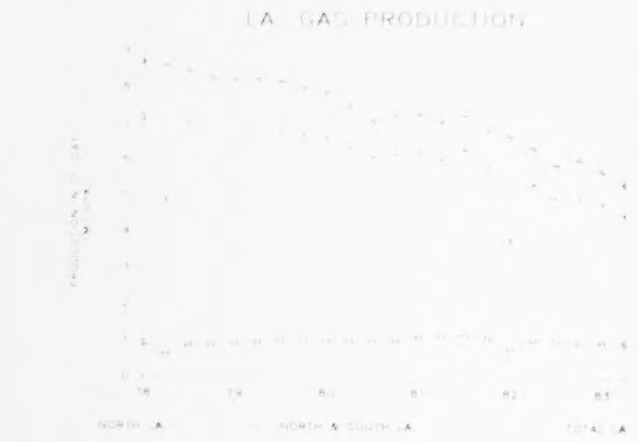
Non-Profit Org
U.S. Postage
PAID
Permit #733
Baton Rouge, LA

Louisiana Energy Indicators is published quarterly by the Center for Energy Studies, Louisiana State University, E. Fraternity Circle, Baton Rouge, LA 70803-0301, (504) 389-0930. For address corrections, please return mailing label to CES with changes. For continued receipt of this and other CES publications, notify Barbara Kavanaugh at the CES address.

Address Correction Requested

Drilling

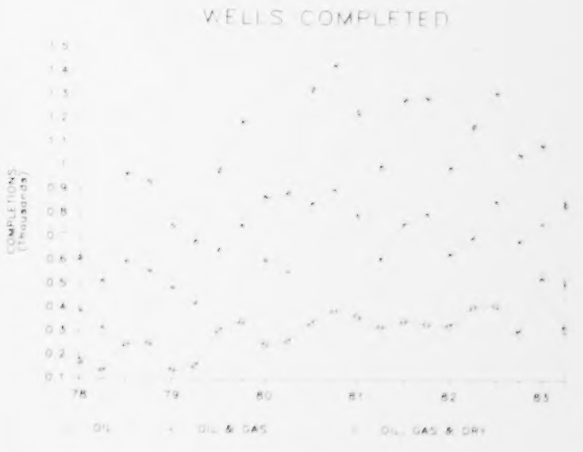


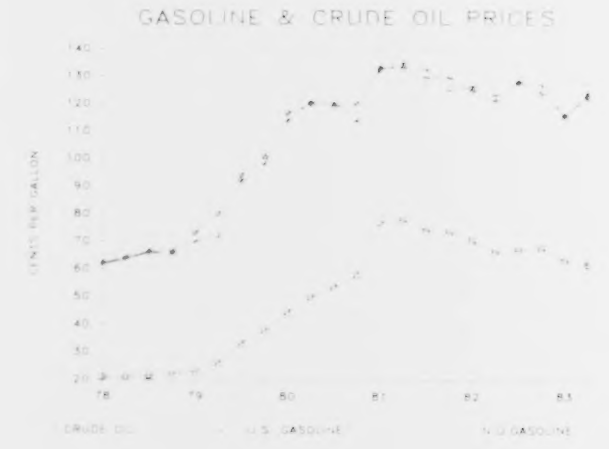


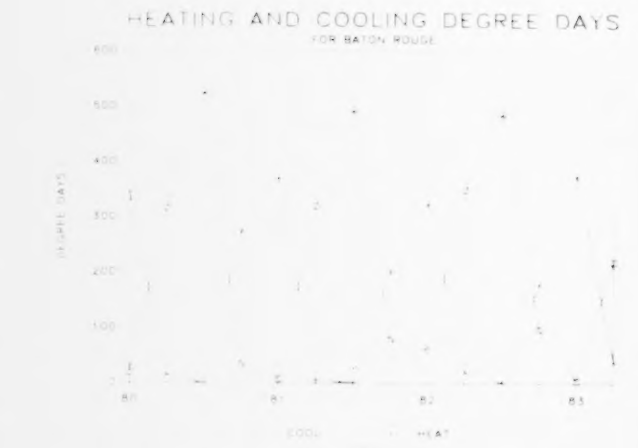
Figures represent total
except when otherwise noted

Indicator	1978	1979	1980	1981	1982	1982.3	1982.4	1983.1	Apr	May	June	1983.2	Year Last 1982	To Date Through Month Reported 1983	Percent Change
OIL WELLS COMPLETED															
North	493	641	926	1,034	1,173	321	203	393	66	81	84	231	574	624	8.7
South	304	272	292	317	339	81	89	144	20	29	30	79	169	223	31.9
Offshore	42	28	20	18	24	13	6	2	1	2	1	4	5	6	20.0
Total	839	941	1,238	1,369	1,536	415	298	539	87	112	115	314	748	853	14.0
GAS WELLS COMPLETED															
North	722	989	1,301	1,212	1,021	325	276	136	53	33	37	123	420	259	-38.3
South	345	342	322	352	381	107	97	84	20	14	20	54	177	138	-22.0
Offshore	43	30	40	31	39	11	12	4	3	8	2	13	16	17	6.2
Total	1,110	1,361	1,663	1,595	1,441	443	385	224	76	55	59	190	613	414	-32.4
DRY HOLES DRILLED															
North	589	575	822	893	988	265	210	151	48	52	61	161	515	312	-39.1
South	649	680	733	895	734	182	151	166	52	46	39	135	401	301	-24.9
Offshore	18	36	51	52	38	13	4	15	3	3	5	11	21	26	23.8
Total	1,256	1,291	1,606	1,840	1,760	460	365	332	103	99	105	307	937	639	-31.6
ACTIVE RIGS - WILDCATTING (Ave.)															
North	20	18	34	33	10	9	8	7	5	5	2	4	11	6	-45.5
South	46	38	68	59	32	23	23	39	22	28	25	25	41	32	-21.9
Offshore	2	4	7	6	3	2	4	6	3	6	5	5	2	6	200.0
Total	68	60	105	98	45	34	35	52	30	39	32	34	68	44	-54.5
ACTIVE RIGS (Ave. End of Month)[1] (DNR)															
North	75	74	103	119	164	159	184	100	49	36	53	46	156	46	-70.5
South	190	185	244	249	161	161	138	149	127	118	93	113	191	113	-40.8
Offshore	9	14	17	18	12	13	12	13	12	11	12	12	14	12	-14.3
Total	274	273	364	386	337	333	334	262	188	165	158	171	361	171	-52.6
RUNNING RIGS (Ave. Hughes Tool Co.)															
North	29	35	52	59	40	27	35	34	22	24	19	22	48	28	-41.6
South	133	169	171	243	168	134	130	143	119	105	119	114	202	129	-25.2
Total	162	204	223	302	208	161	165	177	141	129	138	136	250	157	-37.2

Production, Consumption & Prices



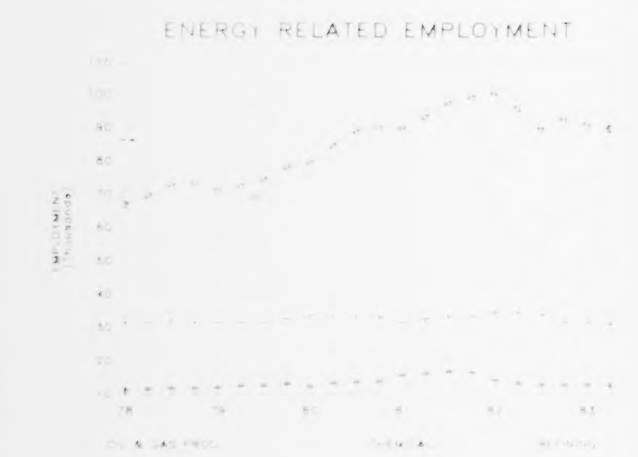




Figures represent total
except when otherwise noted

Indicator	1978	1979	1980	1981	1982	1982.3	1982.4	1983.1	Apr	May	June	1983.2	Year Last 1982	To Date Through Month Reported 1983	Percent Change
NATURAL GAS PRODUCTION (MMCFPD)															
North	908	979	1,000	1,135	1,032	1,990	927	961	836	812	787	811	1,082	886	-18.1
South	6,235	5,845	5,275	4,921	4,195	3,952	4,000	3,830	3,198	3,175	3,117	3,163	4,406	3,496	-20.6
Offshore	1,340	1,309	1,118	1,025	983	913	1,036	886	754	747	806	769	991	828	-16.4
Total	8,483	8,133	7,393	7,081	6,210	6,855	5,963	5,677	4,788	4,734	4,710	4,743	6,479	5,210	-19.6
NATURAL GAS PROD/WELL (MCFPD)															
North	131	133	120	119	101	97	94	92	80	80	76	79	108	86	-20.3
South	1,922	1,819	1,609	1,524	1,338	1,269	1,283	1,215	1,037	1,038	1,030	1,035	1,401	1,125	-19.7
Offshore	2,838	2,575	2,038	1,842	1,744	1,596	1,820	1,577	1,378	1,360	1,476	1,405	1,781	1,491	-16.2
CRUDE OIL PRODUCTION (MBPD) - Ave.															
North	86.4	78.7	79.1	83.5	86.3	86.6	85.8	83.8	84.4	80.6	78.8	81.3	86.4	82.6	-4.3
South	414.9	356.8	318.9	283.2	259.8	263.1	264.0	252.0	258.7	262.4	258.6	259.2	265.3	255.6	-3.6
Offshore	79.3	71.2	67.9	69.4	60.2	62.9	57.7	59.3	64.8	64.4	65.5	64.9	62.5	62.1	-0.6
Total	580.6	506.7	465.9	432.1	406.3	412.6	407.5	395.1	407.9	407.4	402.9	405.4	414.2	400.3	-3.4
REFINERY RUNS (MMBPD)-Ave.	1.85	1.92	1.7	1.73	1.72	1.71	1.78	1.56	1.61	1.74	1.70	1.68	1.67	1.62	-2.9
CRUDE OIL STOCK (MMBbls.)-Ave.	13.5	13.5	16.4	13.01	12.08	13.28	12.38	12.0	13.57	14.83	13.07	13.82	11.07	12.91	16.7
WELL HEAD PRICE OF CRUDE OIL ($Bbl. - Ave.)	9.28	15.88	24.32	31.85	28.50	28.19	28.52	26.57	25.82	25.98	25.79	25.86	28.72	26.26	-8.9
GASOLINE PRICES (Ave. ¢/Gal.)															
New Orleans Ave. Retail Pump	66.43	100.67	113.57	131.3	124.2	127.7	124.0	115.7	120.0	125.8	125.7	123.8	122.9	119.7	-2.6
U.S. Ave. Retail Pump	65.38	98.11	119.87	131.1	127.9	128.2	129.9	115.2	420.1	123.8	123.8	222.6	124.8	118.9	-4.7
NATURAL GAS PRICES ($/MCF)															
Interstate[3]	0.91	1.18	1.59	1.98	3.72	3.78	3.96	4.29	4.37	4.25	4.22	-	3.42	4.31	26.0
Intrastate (A)[4]	1.76	2.14	2.70	3.40	3.71	3.74	3.73	3.82	3.80	3.72	3.72	3.74	3.69	3.78	2.4
Intrastate (B)	1.39	1.46	2.06	2.56	2.80	2.82	2.81	2.87	2.86	2.80	2.81	2.82	2.78	2.85	2.4
GASOLINE CONSUMPTION (Millions Gal.)															
Louisiana	2,157	2,158	2,013	2,103	2,143	548	518	502	180	189	206	575	1,078	1,077	0.0
U.S.	116,780	112,628	106,340	104,158	102,886	26,302	25,621	24,584	-	-	-	-	23,978	24,584	1.3

Prices, Employment, & Revenues



Figures represent total
except when otherwise noted

Indicator	1978	1979	1980	1981	1982	1982.3	1982.4	1983.1	Apr	May	June	1983.2	Year Last 1982	To Date Through Month Reported 1983	Percent Change
ELECTRICITY PRICES (¢/KwH)															
Residential															
CLECO	4.1	4.6	5.3	6.0	6.1	6.8	7.5	6.8	7.1	6.8	6.4	7.4	6.8	7.1	12.1
GSU	5.3	5.8	6.3	7.1	7.6	8.9	8.6	8.1	8.2	8.4	8.2	8.4	8.3	8.3	21.25
LP&L	2.5	3.0	4.7	5.2	5.7	5.9	5.9	5.8	5.8	6.7	5.7	6.0	5.4	5.9	9.2
NOPSI	4.1	4.7	5.8	6.0	6.4	6.2	6.5	5.9	5.7	5.7	5.9	5.8	6.2	5.9	-4.8
SWEPCO[2]	3.0	3.0	3.2	3.8	5.2	5.3	5.8	5.3	5.5	5.9	6.1	5.8	4.0	5.6	40.0
Commercial															
CLECO	4.3	4.6	5.3	5.9	6.4	6.3	7.4	7.7	7.4	7.4	8.4	7.7	6.4	7.3	13.9
GSU	3.8	4.5	5.4	6.5	6.9	6.5	6.4	5.8	6.0	6.3	5.3	5.9	6.5	5.9	35.1
LP&L	2.6	3.2	4.1	5.5	5.8	6.0	6.2	6.1	5.8	5.9	5.4	5.8	5.6	6.6	6.5
NOPSI	4.3	4.9	5.8	6.4	6.7	6.5	6.9	6.5	6.1	6.0	6.2	6.1	6.7	6.6	-1.4
SWEPCO[2]	2.5	2.5	3.2	3.3	4.2	4.3	5.3	4.9	5.0	5.0	5.2	5.1	3.5	5.0	42.8
Industrial															
CLECO	3.8	3.7	5.6	4.6	5.4	5.3	5.6	5.2	5.6	5.6	5.5	5.6	5.0	5.4	8.0
GSU	3.4	3.4	4.1	5.1	5.6	5.4	5.5	4.0	4.0	3.7	3.5	3.7	4.3	3.9	16.4
LP&L	1.5	1.9	3.0	4.0	4.4	4.4	4.6	4.8	4.4	4.5	4.5	4.5	4.2	4.7	10.7
NOPSI	3.1	3.6	5.4	5.0	5.4	5.4	5.5	5.1	4.8	4.8	5.1	4.9	5.3	5.0	-5.7
SWEPCO[2]	2.0	2.0	2.8	2.9	4.1	4.2	4.8	4.4	4.5	4.5	4.8	4.6	3.6	4.5	50.0
EMPLOYMENT (Ave.)															
Oil and gas production (SIC 291)	75.24	78.12	90.11	94.72	93.55	89.10	92.65	90.66	89.9	89.6	89.0	89.5	97.95	90.08	-8.0
Chemical and allied products (SIC 28)	31.46	32.74	33.16	32.66	32.41	33.84	31.35	31.73	31.0	31.1	30.9	31	34.45	31.36	-9.0
Petroleum Refining (SIC 29)	11.31	13.12	13.87	14.41	13.16	12.71	12.80	12.93	12.8	12.9	12.7	12.8	13.63	12.67	-7.4
PRINCIPAL ENERGY RELATED STATE REVENUES ($Millions $)															
Severance - oil and condensate	263.50	274.58	427.46	815.32	776.83	194.68	191.74	188.52	50.23	48.33	55.44	154.0	340.4	342.1	-12.6
Severance - natural gas	194.11	187.39	161.99	164.25	147.52	34.79	36.05	36.59	7.55	11.47	12.67	31.69	76.6	68.3	-10.8
Bonuses	96.65	104.76	220.03	194.46	67.14	9.31	12.83	10.53	2.04	1.13	6.57	9.74	44.9	20.3	-54.9
Rentals	8.47	22.19	31.56	96.40	53.68	12.31	11.92	10.45	2.15	2.89	2.33	7.37	29.4	17.8	-39.3
Royalties	120.10	144.43	252.62	474.66	482.71	110.42	112.74	130.99	33.80	39.16	50.96	103.92	259.4	234.9	-9.4
Special fuels tax	20.06	22.16	22.90	24.75	25.53	6.31	6.57	6.06	2.20	2.09	2.56	6.85	12.5	12.9	3.2
Gasoline tax	170.05	156.56	161.44	165.61	162.29	40.81	40.09	36.69	13.51	14.21	13.14	40.86	81.3	77.5	-4.8
Public utilities tax	15.07	22.14	21.56	25.58	27.88	7.15	6.96	7.56	0.74	5.67	0.86	7.27	13.8	14.7	6.5
Natural gas franchise tax	4.93	4.76	6.29	7.76	9.61	2.11	2.34	3.31	3.37	0.05	0.37	3.79	5.0	7.1	44.0
TOTAL ENERGY REVENUES (Million $)	941.01	992.39	1,306.27	1,818.99	1,753.19	417.89	421.24	430.70	115.59	125.00	124.90	365.43	913.6	796.2	-13.8
TOTAL STATE REVENUES (Millions $)	2,419.2	2,769.5	3,248.1	3,000.2	3824.9	898.1	942.5	897.1	193.5	322.4	223.8	739.7	1,984.3	1,636.3	-17.5
ENERGY RELATED REVENUES AS % OF STATE TOTAL	39.0	43.8	40.2	60.6	45.8	46.5	44.7	48.0	59.7	38.8	55.8	49.4	46.1	47.0	2.6